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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/600,751	06/20/2003	Randy K. Bledsoe	PU4803US	5089

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EXAMINER	
STEADMAN, DAVID J	

ART UNIT	PAPER NUMBER
1656	

DATE MAILED: 04/05/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/600,751	BLEDSOE ET AL.	
	Examiner	Art Unit	
	David J. Steadman	1656	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *20 January 2006*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *38-45 and 113-121* is/are pending in the application.

4a) Of the above claim(s) *113 and 121* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *38-45 and 114-120* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *20 June 2003* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Status of the Application

[1] Claims 38-45 and 113-121 are pending in the application.

[2] Applicant's amendment to claims, filed on 1/20/2006, is acknowledged. This listing of the claims replaces all prior versions and listings of the claims.

[3] Applicant's amendment to the specification, filed on 1/20/2006, is acknowledged.

[4] Receipt of a sequence listing in computer readable form (CRF), a paper copy thereof, a statement of their sameness, and a statement that no new matter has been added to the specification by the paper copy of the sequence CRF, all filed on 1/20/2006, is acknowledged.

[5] Applicant's arguments filed on 1/20/2006 have been fully considered and are deemed to be persuasive to overcome some of the rejections previously applied. Rejections and/or objections not reiterated from previous office actions are hereby withdrawn.

[6] The text of those sections of Title 35, U.S. Code not included in the instant action can be found in a prior Office action.

Election/Restriction

[7] Applicant's comment regarding claim 113, which is directed to non-elected subject matter, is acknowledged. As claim 38 is not yet in condition for allowance, consideration of claims 113 and 121 for rejoinder is not yet required. Accordingly, claims

113 and 121 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to nonelected inventions, there being no allowable generic or linking claim.

Sequence Compliance

[8] In order to perfect sequence compliance, applicant is required to submit a specification amendment directing entry of the sequence listing filed on 1/20/2006 into the instant specification.

Specification/Informalities

[9] Applicant is reminded that amendments to the specification, *e.g.,* amendment to change title or remove a hyperlink, should comply with the requirements of 37 CFR 1.121 and MPEP 714, which requires markings to show changes made relative to the previous version.

Claim Rejections - 35 USC § 112, Second Paragraph

[10] Claims 38-45 and 114-120 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

[a] Claim 38 (claims 39-45 and 114-120 dependent therefrom) is indefinite in the recitation of "the large pocket volume of the GR polypeptide structure," "the A-subunit of said expanded binding pocket," "the B-subunit of said expanded binding pocket," and "the corresponding subunit of the GR/dexamethosone structure" as it is unclear from the

claims and the specification as to what applicant intends as the "the large pocket volume of the GR polypeptide structure," "the A-subunit of said expanded binding pocket" and "the B-subunit of said expanded binding pocket" and how one of skill in the art determines a "corresponding subunit of the GR/dexamethosone structure." It is suggested that applicant clarify the meaning of the terms "the large pocket volume of the GR polypeptide structure," "the A-subunit of said expanded binding pocket," "the B-subunit of said expanded binding pocket," and "the corresponding subunit of the GR/dexamethosone structure." Further, it is noted that there is insufficient antecedent basis for the limitations of "the large pocket volume of the GR polypeptide structure," "the A-subunit of said expanded binding pocket," "the B-subunit of said expanded binding pocket," and "the corresponding subunit of the GR/dexamethosone structure" in the claim.

[b] Claim 38 (claims 39-45 and 114-120 dependent therefrom) is confusing as the claim would suggest that the structure coordinates of Table 3 are of a GR/dexamethosone binary complex, however, the specification at p. 49, lines 21-24 indicates that Table 3 displays structural coordinates for a GR/dex/TIF2 peptide ternary complex. It is suggested that applicant clarify the meaning of the claim. In the interest of advancing prosecution, the examiner has interpreted the claim as meaning that the structure coordinates of Table 3 are of a GR/dex/TIF2 peptide ternary complex.

[c] Claim 38 (claims 39-43, 45, and 114 dependent therefrom) is indefinite in the recitation of "about 58 cubic angstroms" and "about 138 cubic angstroms" as it is unclear as to applicant's intended meaning of the term "about." Neither the specification

nor the claims define the term "about" and it is unclear from the specification and the claims as to what variation in the volume of "58 cubic angstroms" or "138 cubic angstroms" is intended as being encompassed by the term "about." It is suggested that applicant clarify the meaning of the term "about."

[d] Claims 44 and 115-120 recite the limitation "the atomic coordinates are the atomic coordinates shown in Table 2." The claims are unclear because it is unclear as to what in claim 38 has the atomic coordinates of Table 2. It is suggested that applicant clarify the meaning of the claims. In the interest of advancing prosecution, the examiner has interpreted "the atomic coordinates are the atomic coordinates shown in Table 2" as referring to the "atomic coordinates of a GR polypeptide structure" in parts (a) and (b) of claim 38.

Claim Rejections - 35 USC § 112, First Paragraph

[11] Claims 38-45 and 114-120 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contain subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of he claimed invention. This is a new matter rejection.

Claim 38 recites a limitation describing a pocket volume of subunits A and B, which, according to applicant is supported by the specification at p. 31, ll. 9-15. MPEP § 2163 states, "[i]f the originally filed disclosure does not provide support for each claim limitation...a new or amended claim must be rejected under 35 U.S.C. 112, para. 1, as

lacking adequate written description." The cited disclosure at p. 31, ll. 9-15 of the specification describes a GR/FP/TIF2 structure having the structural coordinates of Table 2, which fails to support a model of *any* liganded/unliganded GR polypeptide structure having any structural coordinates.

Claim 115 limits the GR polypeptide to being "comprised within a polypeptide complex which further comprises a co-activator." MPEP § 2163 states, "when filing an amendment an applicant should show support in the original disclosure for new or amended claims." In this case, the examiner can find no showing of support for the limitations of claim 115 as required by MPEP § 2163.

Applicant is invited to show support for the limitations at issue in the claims.

[12] The written description rejection of claims 38-43 and 45 under 35 U.S.C. 112, first paragraph, is maintained for the reasons of record and the reasons stated below. The rejection was fully explained in the prior Office action. New claims 114 and 120 are included in the rejection. Thus, claims 38-43, 45, 114, and 120 are rejected.

RESPONSE TO ARGUMENT: Applicant argues the claims recite the structural characteristics that identify the GR polypeptide structures that are encompassed by the claimed methods and that the specification discloses sufficient detailed, relevant, identifying characteristics to describe the GR polypeptide structures encompassed by the claims.

Applicants' argument is not found persuasive. The examiner maintains the position that the specification fails to describe the genera of recited atomic coordinates of a GR polypeptide structure and the structures thereof in claims 38-43, 45, and 114,

and the GR polypeptides used in the assay for GR-mediated activity of claims 45 and 120. According to MPEP § 2163, when there is substantial variation within the genus, the specification should disclose a representative number of species of a recited genus to reflect the variation among the members of the genus. It is acknowledged that the claims require an expanded binding pocket in the "A-subunit" and the "B-subunit" of a particular volume relative to a "corresponding subunit of the GR/dexamethosone structure" as recited in the claims. However, other than limiting the volume of the pocket volumes of the A- and B-subunits, the structure of the GR polypeptide is unlimited. As noted in the prior Office action, the specification discloses only a *single* representative species of the genus of recited atomic coordinates and structures thereof having an expanded or large pocket volume, *i.e.,* the GR/FP/TIF2 structure having structural coordinates of Table 2. That the specification discloses only a single species of the genus of GR structures having an expanded or large pocket volume is undisputed by applicant. Also, the specification discloses only two representative species of the genus of recited GR polypeptides, *i.e.,* SEQ ID NO:6 and 8. In this case, the genus of atomic coordinates and corresponding 3-D structures or GR polypeptides encompasses species that are *widely* variant and the single disclosed species of genus of recited atomic coordinates and structures thereof having an expanded or large pocket volume and the two disclosed species of GR polypeptides fail to reflect the variation of the members of the genus. Given the lack of description of a representative number of species, the specification fails to sufficiently describe the claimed invention in such full,

clear, concise, and exact terms that a skilled artisan would recognize that applicant was in possession of the claimed invention.

[13] The scope of enablement rejection of claims 38-43 and 45 under 35 U.S.C. 112, first paragraph, is maintained for the reasons of record and the reasons stated below. The rejection was fully explained in the prior Office action. New claims 114 and 120 are included in the rejection. Thus, claims 38-43, 45, 114, and 120 are rejected.

RESPONSE TO ARGUMENT: Applicant argues that in view of the breadth of the claims as amended, the amount of guidance and direction provided in the specification, the disclosure of multiple working examples, the state of the prior art, and high level of skill in the art, the specification fully enables the full scope of claimed methods without requiring undue experimentation.

Applicants' argument is not found persuasive. The examiner maintains the position that the specification fails to enable the full scope of the claimed invention without undue experimentation. In this case, the claims are overly broad, encompassing the use of any structure of GR having any structural coordinates that has the increased volume as recited in the claims. In this case, the specification discloses only a single working example of structural coordinates that can be used to generate a structure that has such an expanded binding pocket, *i.e.,* the structural coordinates of Table 2. Further, the specification discloses only a single working example of a GR structure having an expanded binding pocket that is useful for identifying binding compounds, *i.e.,* the structure of a GR/FP/TIF2 complex having the structural coordinates of Table 2.

While methods for generating homology models of a given structure were known at the time of the invention, the specification fails to disclose any relevant guidance for determining whether any other structures of a "GR polypeptide structure" as encompassed by the claims represent a *biologically relevant* form of a GR polypeptide. It is just as likely that other 3-D structures of GR polypeptides as encompassed by the claims represent inactive GR polypeptides. Applicant's own specification acknowledges the high level of unpredictability in using homology models for identifying ligands intended for a biological use. See specification at p. 7, line 23 to p. 8, line 19. In view of the broad scope of the claims, the lack of guidance and working examples, and the high level of unpredictability in using other structures of GR with no expectation that such structures represent a biologically relevant form of a GR polypeptide, a significant amount of non-routine experimentation is required to confirm whether any alternative structure of a GR polypeptide as encompassed by the claims is useful in accordance with the asserted utility of the claimed methods.

Also, it is noted that claim 45 further encompasses a step of "identifying in an assay for GR-mediated activity a modeled ligand that increases or decreases the activity of GR. The examiner has interpreted this step as being an *in vitro* for screening those modeled ligands for those that increase or decrease the activity of GR. The claim is so broad as to encompass any method for screening using any GR polypeptide. However, the specification discloses only a single working example of such method, *i.e.,* the method disclosed at p. 10 of the specification, and discloses only two working examples of GR polypeptides, *i.e.,* SEQ ID NO:6 and 8. Other than these two working

examples, the specification fails to provide any guidance for altering the structures of SEQ ID NO:6 and 8 with an expectation of obtaining a GR polypeptide that has the desired activity/utility. While methods of generating variants of a given polypeptide and methods of isolating homologous polynucleotides, e.g., hybridization, were known, it was not routine in the art to screen for or make *all* GR polypeptides from any source having a substantial number of substitutions or modifications as encompassed by the instant claims.

In view of the overly broad scope of the claims, the lack of guidance and working examples provided in the specification, the high level of unpredictability as evidenced by the prior art, and the amount of experimentation required, undue experimentation is necessary for a skilled artisan to make and use the entire scope of the claimed invention. Thus, applicant has not provided sufficient guidance to enable one of ordinary skill in the art to make and use the claimed invention in a manner reasonably correlated with the scope of the claims. The scope of the claims must bear a reasonable correlation with the scope of enablement (*In re Fisher*, 166 USPQ 19 24 (CCPA 1970)). Without sufficient guidance, determination of having the desired characteristics is unpredictable and the experimentation left to those skilled in the art is unnecessarily, and improperly, extensive and undue. See *In re Wands* 858 F.2d 731, 8 USPQ2nd 1400 (Fed. Cir, 1988).

Claim Rejections - 35 USC § 102

[14] The rejection of claims 38 and 44 under 35 U.S.C. 102(b) as being anticipated by Gillner et al. (WO 00/52050; cited in the IDS filed 5/3/2004) and the rejection of claims 38 and 42-45 under 35 U.S.C. 102(e) as being anticipated by Apolito et al. (WO 03/015692; cited in the IDS filed 5/3/2004) are withdrawn in view of the amendment to claim 38 to define the expanded binding pocket.

Claim Rejections - 35 USC § 103

[15] The rejection of claims 39-41 under 35 U.S.C. 103(a) as being unpatentable over Apolito et al. in view of Johnson (*Ann Allergy Asthma Immunol* 81:35-40) and Högger et al. (*Steroids* 59:597-602) is withdrawn in view of the amendment to claim 38 to define the expanded binding pocket. While one of ordinary skill in the art would have recognized that other GR binding ligands were larger than dex (*e.g.,* FP, see p. S435 of Johnson) and would therefore occupy a larger volume, there is no teaching or suggestion in the prior art to increase the binding pocket of GR in the GR/dex/TIF2 3-D structure as disclosed by Apolito et al. to accommodate a larger modeled ligand. For example, regarding design of the modeled ligand, Apolito et al. teaches "[g]enerally, initial substitutions are conservative, i.e., the replacement group will have approximately the same size, shape, hydrophobicity and charge" (p. 65, lines 31-33) and that "components known in the art to alter conformation are preferably avoided" (p. 65, line 33 to p. 66, line 1).

[16] The following excerpt is from MPEP § 2106 section VI "DETERMINE WHETHER THE CLAIMED INVENTION COMPLIES WITH 35 U.S.C. 102 AND 103" and is applied to the below 35 USC §103(a) rejection wherein the claimed limitations of "machine readable data comprising structure coordinates," "the structure coordinates of Figure 3" and "the structure coordinates that are also present in the portion of the protein specified in Table 2" are considered "non-functional descriptive material" (see independent claims 1 and 6).

> As is the case for inventions in any field of technology, assessment of a claimed computer-related invention for compliance with 35 U.S.C. 102 and 103 begins with a comparison of the claimed subject matter to what is known in the prior art. If no differences are found between the claimed invention and the prior art, the claimed invention lacks novelty and is to be rejected by Office personnel under 35 U.S.C. 102. Once distinctions are identified between the claimed invention and the prior art, those distinctions must be assessed and resolved in light of the knowledge possessed by a person of ordinary skill in the art. Against this backdrop, one must determine whether the invention would have been obvious at the time the invention was made. If not, the claimed invention satisfies 35 U.S.C. 103. Factors and considerations dictated by law governing 35 U.S.C. 103 apply without modification to computer-related inventions.
>
> If the difference between the prior art and the claimed invention is limited to descriptive material stored on or employed by a machine, Office personnel must determine whether the descriptive material is functional descriptive material or nonfunctional descriptive material, as described supra in sections IV.B.1(a) and IV. B.1(b). Functional descriptive material is a limitation in the claim and must be considered and addressed in assessing patentability under 35 U.S.C. 103. Thus, a rejection of the claim as a whole under 35 U.S.C. 103 is inappropriate unless the functional descriptive material would have been suggested by the prior art. > In re Dembiczak, 175 F.3d 994, 1000, 50 USPQ2d 1614, 1618 (Fed. Cir. 1999).< Nonfunctional descriptive material cannot render nonobvious an invention that would have otherwise been obvious. Cf. In re Gulack, 703 F.2d 1381, 1385, 217 USPQ 401, 404 (Fed. Cir. 1983) (when descriptive material is not functionally related to the substrate, the descriptive material will not distinguish the invention from the prior art in terms of patentability).
>
> Common situations involving nonfunctional descriptive material are:

- a computer-readable storage medium that differs from the prior art solely with respect to nonfunctional descriptive material, such as music or a literary work, encoded on the medium,

- a computer that differs from the prior art solely with respect to nonfunctional descriptive material that cannot alter how the machine functions (i.e., the descriptive material does not reconfigure the computer), or

- a process that differs from the prior art only with respect to nonfunctional descriptive material that cannot alter how the process steps are to be performed to achieve the utility of the invention.

Thus, if the prior art suggests storing a song on a disk, merely choosing a particular song to store on the disk would be presumed to be well within the level of ordinary skill in the art at the time the invention was made. The difference between the prior art and the claimed invention is simply a rearrangement of nonfunctional descriptive material.

[17] Claims 38-45 and 114-120 are rejected under 35 U.S.C. 103(a) as being unpatentable over Apolito et al. (WO 03/015692; cited in the IDS filed 5/3/2004) in view of *In re Gulack* 217 USPQ 401 (Fed. Cir. 1983) and *In re Ngai* 70 USPQ2d 1862 (Fed. Cir. 2004). See MPEP §§ 2144 and 2144.04 regarding legal precedent as a source of rationale for rejection under 35 U.S.C. § 103.

All claim limitations concerning the atomic coordinates of a GR polypeptide, optionally wherein the atomic coordinates are those of Table 2, are given no patentable weight as atomic coordinates are considered to be non-functional descriptive material. As such, the instant claims are considered to be limited to a method comprising the steps of providing atomic coordinates of a polypeptide, and modeling a ligand that fits into the binding pocket of the polypeptide.

Apolito et al. teaches a method for identifying a GR modulator by modeling the structure of the ligand binding domain of a human GR that comprises a sequence that is

100% identical to SEQ ID NO:6 herein complexed with a TIF2 ligand and a dexamethosone agonist, and identifying modeled compounds, including non-steroid compounds, that interact with the human GR ligand binding domain and optionally screening the compound for its effect on a GR polypeptide (pp. 14 and 54-66 and claims 82, 84, and 88).

Apolito et al. does not fairly teach the use of structural coordinates as recited in the instant claims. However, this particular data required by the instant claims is considered to be non-functional descriptive material. In *Gulack* and *Ngai*, the respective Courts held that nonfunctional descriptive material cannot render nonobvious an invention that would have otherwise been obvious. Therefore it would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains to employ the method of Apolito et al. for identifying ligands of a GR polypeptide using any set of structural coordinates as defined in the claims.

[18] Claims 38-44 and 114-120 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gillner et al. (WO 00/52050; cited in the IDS filed 5/3/2004) in view of *In re Gulack* 217 USPQ 401 (Fed. Cir. 1983) and *In re Ngai* 70 USPQ2d 1862 (Fed. Cir. 2004). See MPEP §§ 2144 and 2144.04 regarding legal precedent as a source of rationale for rejection under 35 U.S.C. § 103.

All claim limitations concerning the atomic coordinates of a GR polypeptide, optionally wherein the atomic coordinates are those of Table 2, are given no patentable weight as atomic coordinates are considered to be non-functional descriptive material.

As such, the instant claims are considered to be limited to a method comprising the steps of providing atomic coordinates of a polypeptide, and modeling a ligand that fits into the binding pocket of the polypeptide.

Gillner et al. teaches modeling GR with various steroid ligands (*e.g.*, pp. 12-13), *in vitro* assays of these ligands with GR to determine binding affinities (*e.g.*, p. 16, bottom), and a method of rational drug design using a GR model to identify new GR ligands (p. 6 and claims 12-13).

Gillner et al. does not fairly teach the use of structural coordinates as recited in the instant claims. However, this particular data required by the instant claims is considered to be non-functional descriptive material. In *Gulack* and *Ngai*, the respective Courts held that nonfunctional descriptive material cannot render nonobvious an invention that would have otherwise been obvious. Therefore it would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains to employ the method of Gillner et al. for identifying ligands of a GR polypeptide using any set of structural coordinates as defined in the claims.

[19] Claim 45 is rejected under 35 U.S.C. 103(a) as being unpatentable over Gillner et al. (WO 00/52050; cited in the IDS filed 5/3/2004) in view of *In re Gulack* 217 USPQ 401 (Fed. Cir. 1983) and *In re Ngai* 70 USPQ2d 1862 (Fed. Cir. 2004) as applied to claims 38-44 and 114-120 above and further in view of Högger et al. (*Steroids* 59:597-602; cited in the prior Office action).

Claim 45 is drawn to the method of claim 38 further comprising identifying in an assay for GR-mediated activity a modeled ligand that increases or decreases the activity of the GR.

The teachings of Gillner et al., *In re Gulack,* and *In re Ngai* are described above. The combination of references does not teach using a ligand identified by the methods of Gillner et al. for its effect on GR activity.

Högger et al. teaches a method for *in vitro* measurement of GR-ligand binding activity (p. 598).

At the time of the invention, it would have been obvious to one of ordinary skill in the art to combine the teachings of Gillner et al. and Högger et al. to practice the method of Gillner et al. using any structural coordinates of a GR polypeptide structure and to further analyze the binding activity of the modeled compound *in vitro*. One would have been motivated to do this in order to determine whether a modeled ligand has the ability to bind to GR *in vitro* and to compare its binding activity to other known GR ligands. One would have a reasonable expectation of success for practicing the method of Gillner et al. using any structural coordinates of a GR polypeptide structure and to further analyze the binding activity of the modeled compound *in vitro* because of the results of Gillner e al. and Högger et al. Therefore, claim 45, drawn to the method described above would have been obvious to one of ordinary skill in the art.

Conclusion

[20] Status of the claims:

Claims 38-45 and 113-121 are pending.

Claims 113 and 121 are withdrawn from consideration.

Claims 38-45 and 114-120 are rejected.

No claim is in condition for allowance.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to David J. Steadman whose telephone number is 571-272-0942. The examiner can normally be reached on Monday to Friday, 7:30 am to 4:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kathleen Kerr can be reached at 571-272-0931. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

David J. Steadman, Ph.D.
Primary Examiner
Art Unit 1656